

# **1996 Missouri Pediatric Nutrition Surveillance System**

## **Executive Summary**

The Pediatric Nutrition Surveillance System (PedNSS) is a national system established and maintained by the Division of Nutrition, Centers for Disease Control and Prevention (CDC). The purpose of this surveillance system is to provide major nutrition-related data on high-risk infants, children and adolescents from birth to 18 years of age. The surveillance population is characterized by the prevalence and trends of the following nutritional status indicators: 1) short stature 2) underweight 3) overweight 4) anemia and 5) low birth weight. In addition, the prevalence rate of the initiation and duration of breastfeeding of infants up to 6 months of age is reported.

The Missouri PedNSS is composed of data obtained exclusively from infants and children participating in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Thus, this report describes the nutritional status of low-income children in Missouri from birth through 4 years of age during the calendar year 1996. A total of 208 WIC clinic sites submitted data to CDC to provide 221,320 records that were accepted for analyses.

## **Sociodemographic Characteristics**

The 1996 surveillance population in Missouri consisted primarily of two ethnic groups White (71.5%) and Black (24.3%), with Hispanics comprising only 2.4%, Asians, 0.8%, American Indians, 0.2%, and All Others, 0.8%. Children under 1 year of age represented the largest group, followed by 3 to 4-year-olds, children 12 to 23 months and those aged 24 to 35 months (33.4, 27.0, 22.8 and 16.9%, respectively). This report will focus largely on four ethnic groups, White, Black, Hispanic and Asian.

## ***Nutritional Status Indicators***

### **Low Birth Weight**

Overall, 9.4% of the children were of low birth weight (LBW), weighing less than 2500 grams, or 5.5 pounds, at birth. The highest rate was reported among Black (13.6%) and the lowest among Hispanic children (7.6%).

### **Short Stature**

Short stature is defined as length- or height-for-age below the fifth percentile of the reference height of children of the same age and sex. This is used as an indication of chronic undernutrition. The overall prevalence rate for short stature was 8.5%, with the highest rate found among infants less than 1 year of age (10.6%) and the lowest among 2 to 4-year-olds (6.6%). Among ethnic groups, the highest prevalence of short stature (9.6%) was seen in Black children.

### **Underweight**

Underweight or thinness, defined as below the fifth percentile of weight-for-height or -length of the reference population, is often associated with recent or chronic disease. The expected rate of low weight-for-height in the general population under normal

conditions, is 5% or lower. In 1996, the prevalence rate of underweight children in the Missouri surveillance population was 2.0%, suggesting that this is not a major public health problem in the population monitored.

### **Overweight**

Overweight is defined as weight-for-height or -length above the 95th percentile of the reference population. The overall prevalence rate of overweight among Missouri children was 8.0%, with the highest prevalence among 1-year-olds (12.0%). The rate dropped to 6.7% among the 2 to 4-year-olds. A similar low rate of 6.8% was reported for children under 1 year of age.

### ***Anthropometric Trends***

Since 1990, the prevalence of LBW has increased gradually from 7.8% to 9.4% in 1995 and again in 1996. Overall, the increase in LBW has amounted to a total of 1.6 percentage points, representing a 21% increase. Between 1990 and 1996, the rate for short stature dropped 3.7 percentage points, equivalent to a 30% reduction in prevalence. There is a sharp peak of 4% in the prevalence of underweight children in 1992 followed by subsequent declines in rate. Overall, since 1990, the reduction in the prevalence of underweight is approximately 39%. The prevalence of overweight has remained below 10.0% (range: 7.3 to 9.5%) since 1990. However, there has been a gradual increase in rate starting in 1993.

### **Anemia (Low hemoglobin)**

Anemia is defined as hemoglobin and/or hematocrit levels below the 5th percentile values of a reference population. The overall prevalence rate of anemia in Missouri was 22.0%, with the lowest rate seen among children under 1 year old (21.2%), while the rates were one percentage point higher among the older children. Across ethnic groups, Black children of all age groups had the highest rates, with an overall rate of 32.0%. Since 1990, the prevalence rate of anemia in the state has dropped by approximately 25%.

### **Initiation and Duration of Breastfeeding**

Overall, among children seen at their initial clinic visit, only 40.4% were reported to have ever breastfed. The lowest prevalence was among Black (23.8%) while considerably more than twice as many Hispanic children (56.4%) ever breastfed.

Among children who were 6 to 8 months of age at clinic visit, the prevalence of the duration of breastfeeding was essentially the same at less than a week and at one+ week. The greatest reduction in rate was between one+ week and one+ month duration, from 40.7% to 29.9%. A slow and steady decline in rate was reported through the 6+ months duration, at which time the rate was 21.1%.